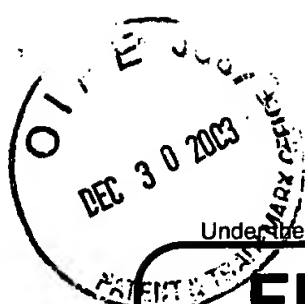


12-31-03

Image 1652 AF \$

CERTIFICATE OF MAILING BY "EXPRESS MAIL" UNDER 37 CFR 1.10 - SEPARATE PAPER		ATTORNEY'S DOCKET NO. 030831
IN RE APPLICATION OF: O'Donohue, et al.		
Application Serial No.: 09/621,448	Filing Date: July 21, 2000	
Title: Method for Producing L-Amino Acids Using a <i>Corynebacterium glutamicum</i> with a Disrupted <i>pgi</i> Gene (as amended)		
Group Art Unit 1652	Examiner David J. Steadman	
<p>Express Mail mailing label number: EV 256984685 US Date of Deposit: December 30, 2003</p> <p>I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to MAIL STOP APPEAL BRIEF-PATENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313- 1450.</p> <p><u>Ellie Pingree</u> (Typed or printed name of person mailing paper or fee)</p> <p><u>Ellie Pingree</u> (Signature of person mailing paper or fee)</p>		



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 330.00

Complete if Known

Application Number	09/621,448
Filing Date	July 21, 2000
First Named Inventor	O'Donohue
Examiner Name	Steadman, David J.
Art Unit	1652
Attorney Docket No.	030831

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☒ Deposit Account:Deposit Account Number
Deposit Account Name

02-4553

Buchanan Ingersoll

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments☒ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$ 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims		-20** =		X		=	
Independent Claims		-3** =		X		=	
Multiple Dependent						=	

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2)

(\$)

**or number previously paid, if greater; For Reissues, see above

3. ADDITIONAL FEES

Large Entity

Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	330.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 330.00

SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	Craig G. Cochenour	Registration No. (Attorney/Agent)	33,666	Telephone	412-562-3978
Signature		Date	12-30-03		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Related Appeals and Interferences

There are no related appeals or interferences known to Applicants/Appellants or the Applicants'/Appellants' legal representatives.

Status of Claims

As discussed in "Status of Amendments Filed Subsequent to Final Rejection," below, it is Applicants'/Appellants' understanding that the Amendment and Reply Under 37 C.F.R. § 1.116 filed on September 2, 2003, has been entered by the Examiner. It is Applicants'/Appellants' further understanding that following entry of the Amendment and Reply Under 37 C.F.R. § 1.116 and a subsequent Examiner's Amendment following a December 5, 2003, Interview with the Examiner, claims 1 through 23 of this Application have been cancelled without prejudice to or disclaimer of the subject matter therein, and claims 24 and 25 have been the subject of a Notice of Allowance/Notice of Allowability albeit Applicants'/Appellants' have not yet physically received the Examiner's Notice of Allowance/Notice of Allowability.

Status of Amendments Filed Subsequent to Final Rejection

An Amendment and Reply Under 37 C.F.R. § 1.116 ("the Amendment") was filed on September 2, 2003, with any and all necessary fees and requests for extension of time. The Amendment sought cancellation of claims 7, 18, 20, and 21. The Amendment sought amendment of claim 8 and set forth claim 1 (as previously presented and as allowed by the Examiner) during prosecution. The Amendment sought addition of new claims 24 and 25.

The Examiner extended the Applicants/Appellants the much-appreciated courtesy of an interview on December 4, 2003, during which the Examiner indicated that claims 24 and 25

would be in condition for allowance following an Examiner's Amendment and cancellation of claims 1 and 8. On December 5, 2003, Applicants/Appellants indicated to the Examiner that those actions were acceptable. It is therefore Applicants'/Appellants' belief that the Amendment has been entered, claims 1 and 8 have been cancelled, and claims 24 and 25 are in a condition for allowance with a Notice of Allowance/Notice of Allowability pending receipt by the Applicants/Appellants.

Summary of the Invention

The claims on appeal, namely claims 1, 7, 8, 18, 20 and 21, relate, in general, to a method of producing L-amino acids and to a gene encoding phosphoglucosomerase.

Issues

Based on an Interview with the Examiner, and Applicants'/Appellants' conversation with the Examiner on December 29, 2003 concerning the status of the Notice of Allowance/Notice of Allowability and wherein the Examiner has confirmed to Applicants'/Appellants' legal representatives that the Notice of Allowance/Notice of Allowability have as of December 29, 2003 been entered, Applicants/Appellants believe that claims 24 and 25 are in a condition for allowance (with Applicants'/Appellants' anticipated physical receipt of the Examiner's already-entered Notice of Allowance/Notice of Allowability pending), and that claims 1 through 23 (inclusive) of the above-captioned Application have been cancelled by Examiner's Amendment. Therefore, there appear to be no pending issues of contention in the Application, and the instant brief is filed out of an abundance of caution and in the interest of preserving all rights due Applicants/Appellants with respect to the filing date of the Application. No waiver, prejudice, or disclaimer is intended by this brief.

Grouping of Claims

Group I comprises claims 1, 7, 8, 18, 20 and 21.

ARGUMENT

Applicants/Appellants note the Manual of Patent Examining Procedure Section 1206 provides that a brief must be filed to preserve Applicants'/Appellants' right to appealed claims, notwithstanding circumstances, such as the filing of an amendment, even if it is one which the Examiner has indicated may place one or more claims in conditions for allowance, unless the Examiner, in acting on the amendment disposes of all issues on appeal. Because Applicants/Appellants believe that the Examiner's Notice of Allowance/Notice of Allowability (entered by the Examiner but not yet physically received by the Applicants/Appellants) shall dispose of all issues on appeal, Applicants/Appellants believe that for the above noted reasons that no argument is necessary. In the unlikely event that the Examiner's Notice of Allowance/Notice of Allowability does not dispose of all issues on appeal, Applicants/Appellants incorporate by reference Applicants'/Appellants' arguments set forth in the Amendment as to claims 1 and 8 in this Appeal Brief, and respectfully request reversal of the rejections and allowance of claims 1 and 8.

CONCLUSION

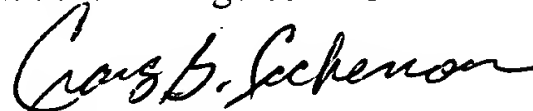
Applicants/Appellants respectfully await receipt of the Examiner's Notice of Allowance/Notice of Allowability, wherein it is anticipated that claims 24 and 25 added by the Amendment are in condition for allowance, and wherein claims 1 and 8 have been cancelled by Examiner's amendment, all of which are pursuant to the December 4, 2003, and December 5,

2003, Interview with the Examiner, and wherein claims 7,18, 20 and 21 were cancelled under the Amendment.

ASSOCIATE POWER OF ATTORNEY

A copy of an associate power of attorney is enclosed that appoints
Craig G. Cochenour, Esq., Registration No. 33,666, of Buchanan Ingersoll PC
as Associate Attorney in this Application.

Respectfully submitted,
Buchanan Ingersoll PC



Craig G. Cochenour
Registration No. 33,666
One Oxford Centre
301 Grant Street, 20th Floor
Pittsburgh, PA 15219-1410
Telephone: (412) 562-3978
Facsimile: (412) 562-1041
Attorneys for Applicants/Appellants

Date: December 30, 2003

APPENDIX

The claims listed in this Appendix reflect claim 1 (allowed in the Final Action) and claims 7, 8, 18, 20 and 21 (objected or rejected in the Final Action) and claims 24 and 25 added subsequent to the Final Action, all of which are as presented in the Applicant's/Appellants' "Amendment and Reply Under 37 C.F.R. § 1.116" in response to the Examiner's Final Action. Note further that because Applicants/Appellants are not yet in receipt of the entered Notice of Allowance/Notice of Allowability wherein it is anticipated that claims 1 and 8 have been cancelled by Examiner's amendment, and wherein claims 24 and 25 are in condition for allowance, claims 24 and 25 as set forth below may not be in the exact form as may be set forth in the Examiner's Amendment. In light of the above comments, the following claims are set forth as follows:

1. A method of producing an amino acid selected from the group consisting of L-lysine, L-threonine and L-isoleucine comprising:

culturing an altered *Corynebacterium glutamicum* cell, wherein said *Corynebacterium glutamicum* cell has a disrupted phosphoglucose isomerase (*pgi*) gene, wherein yields of an amino acid selected from the group consisting of L-lysine, L-threonine and L-isoleucine from said altered *Corynebacterium glutamicum* cell having a disrupted *pgi* gene are from about 1% to about 25% greater than yields from a *Corynebacterium glutamicum* cell having a non-disrupted *pgi* gene.

7. (Cancelled)

8. The method of claim 1, wherein said altered *Corynebacterium glutamicum* cell having a disrupted *pgi* gene is produced by

(a) subcloning an internal region of the *pgi* gene into a suicide vector; and

(b) inserting said resulting vector from step (a) into a *Corynebacterium glutamicum* genome via homologous recombination.

18. (Cancelled)

20. (Cancelled)

21. (Cancelled)

24. A method of producing L-amino acids selected from the group consisting of L-lysine, L-threonine and L-isoleucine, comprising:

culturing an altered *Corynebacterium glutamicum* cell having a decreased amount of phosphoglucose isomerase enzymatic activity as compared to an unaltered *Corynebacterium glutamicum* cell wherein said L-amino acid yields from said altered *Corynebacterium glutamicum* cell are from about 1% to about 25% greater than yields from an unaltered *Corynebacterium glutamicum* cell, wherein said *Corynebacterium glutamicum* cell has a disrupted *pgi* gene.

25. The method of claim 24, wherein said altered *Corynebacterium glutamicum* cell having a disrupted *pgi* gene is produced by

(a) subcloning an internal region of a *pgi* gene into a suicide vector; and

(b) inserting said resulting vector from step (a) into a *Corynebacterium glutamicum* genome via homologous recombination.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

O'DONOHUE *et al.*

Appl. No.: 09/621,448

Filed: July 21, 2000

For: **Methods for Producing L-Amino
Acids Using a Corynebacterium
Glutamicum with a Disrupted PGI
Gene**

Confirmation No.: 4431

Art Unit: 1652

Examiner: Steadman, David J.

Atty. Docket: 1533.1010002/MAC

Associate Power of Attorney

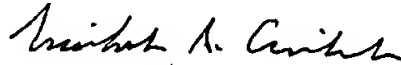
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The undersigned, Michele A. Cimbala, attorney of record in the present application, hereby appoints Craig G. Cochenour, Esq., Registration No. 33,666, of the firm **BUCHANAN INGERSOLL PC**, One Oxford Centre, 20th Floor, 301 Grant Street, Pittsburgh, Pennsylvania 15219 (telephone (412)562-3978, Facsimile (412)562-1041) as Associate Attorney with full power to prosecute the above-identified application.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michele A. Cimbala
Attorney for Applicants
Registration No. 33,851

Date: December 29, 2003

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

213661.1

Atty. Ref. No. 030831

Related Appeals and Interferences

There are no related appeals or interferences known to Applicants/Appellants or the Applicants'/Appellants' legal representatives.

Status of Claims

As discussed in "Status of Amendments Filed Subsequent to Final Rejection," below, it is Applicants'/Appellants' understanding that the Amendment and Reply Under 37 C.F.R. § 1.116 filed on September 2, 2003, has been entered by the Examiner. It is Applicants'/Appellants' further understanding that following entry of the Amendment and Reply Under 37 C.F.R. § 1.116 and a subsequent Examiner's Amendment following a December 5, 2003, Interview with the Examiner, claims 1 through 23 of this Application have been cancelled without prejudice to or disclaimer of the subject matter therein, and claims 24 and 25 have been the subject of a Notice of Allowance/Notice of Allowability albeit Applicants'/Appellants' have not yet physically received the Examiner's Notice of Allowance/Notice of Allowability.

Status of Amendments Filed Subsequent to Final Rejection

An Amendment and Reply Under 37 C.F.R. § 1.116 ("the Amendment") was filed on September 2, 2003, with any and all necessary fees and requests for extension of time. The Amendment sought cancellation of claims 7, 18, 20, and 21. The Amendment sought amendment of claim 8 and set forth claim 1 (as previously presented and as allowed by the Examiner) during prosecution. The Amendment sought addition of new claims 24 and 25.

The Examiner extended the Applicants/Appellants the much-appreciated courtesy of an interview on December 4, 2003, during which the Examiner indicated that claims 24 and 25

would be in condition for allowance following an Examiner's Amendment and cancellation of claims 1 and 8. On December 5, 2003, Applicants/Appellants indicated to the Examiner that those actions were acceptable. It is therefore Applicants'/Appellants' belief that the Amendment has been entered, claims 1 and 8 have been cancelled, and claims 24 and 25 are in a condition for allowance with a Notice of Allowance/Notice of Allowability pending receipt by the Applicants/Appellants.

Summary of the Invention

The claims on appeal, namely claims 1, 7, 8, 18, 20 and 21, relate, in general, to a method of producing L-amino acids and to a gene encoding phosphoglucosomerase.

Issues

Based on an Interview with the Examiner, and Applicants'/Appellants' conversation with the Examiner on December 29, 2003 concerning the status of the Notice of Allowance/Notice of Allowability and wherein the Examiner has confirmed to Applicants'/Appellants' legal representatives that the Notice of Allowance/Notice of Allowability have as of December 29, 2003 been entered, Applicants/Appellants believe that claims 24 and 25 are in a condition for allowance (with Applicants'/Appellants' anticipated physical receipt of the Examiner's already-entered Notice of Allowance/Notice of Allowability pending), and that claims 1 through 23 (inclusive) of the above-captioned Application have been cancelled by Examiner's Amendment. Therefore, there appear to be no pending issues of contention in the Application, and the instant brief is filed out of an abundance of caution and in the interest of preserving all rights due Applicants/Appellants with respect to the filing date of the Application. No waiver, prejudice, or disclaimer is intended by this brief.

Grouping of Claims

Group I comprises claims 1, 7, 8, 18, 20 and 21.

ARGUMENT

Applicants/Appellants note the Manual of Patent Examining Procedure Section 1206 provides that a brief must be filed to preserve Applicants'/Appellants' right to appealed claims, notwithstanding circumstances, such as the filing of an amendment, even if it is one which the Examiner has indicated may place one or more claims in conditions for allowance, unless the Examiner, in acting on the amendment disposes of all issues on appeal. Because Applicants/Appellants believe that the Examiner's Notice of Allowance/Notice of Allowability (entered by the Examiner but not yet physically received by the Applicants/Appellants) shall dispose of all issues on appeal, Applicants/Appellants believe that for the above noted reasons that no argument is necessary. In the unlikely event that the Examiner's Notice of Allowance/Notice of Allowability does not dispose of all issues on appeal, Applicants/Appellants incorporate by reference Applicants'/Appellants' arguments set forth in the Amendment as to claims 1 and 8 in this Appeal Brief, and respectfully request reversal of the rejections and allowance of claims 1 and 8.

CONCLUSION

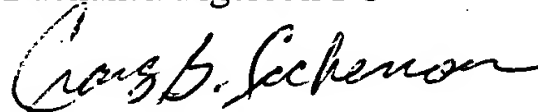
Applicants/Appellants respectfully await receipt of the Examiner's Notice of Allowance/Notice of Allowability, wherein it is anticipated that claims 24 and 25 added by the Amendment are in condition for allowance, and wherein claims 1 and 8 have been cancelled by Examiner's amendment, all of which are pursuant to the December 4, 2003, and December 5,

2003, Interview with the Examiner, and wherein claims 7,18, 20 and 21 were cancelled under the Amendment.

ASSOCIATE POWER OF ATTORNEY

A copy of an associate power of attorney is enclosed that appoints
Craig G. Cochenour, Esq., Registration No. 33,666, of Buchanan Ingersoll PC
as Associate Attorney in this Application.

Respectfully submitted,
Buchanan Ingersoll PC



Craig G. Cochenour
Registration No. 33,666
One Oxford Centre
301 Grant Street, 20th Floor
Pittsburgh, PA 15219-1410
Telephone: (412) 562-3978
Facsimile: (412) 562-1041
Attorneys for Applicants/Appellants

Date: December 30, 2003

APPENDIX

The claims listed in this Appendix reflect claim 1 (allowed in the Final Action) and claims 7, 8, 18, 20 and 21 (objected or rejected in the Final Action) and claims 24 and 25 added subsequent to the Final Action, all of which are as presented in the Applicant's/Appellants' "Amendment and Reply Under 37 C.F.R. § 1.116" in response to the Examiner's Final Action. Note further that because Applicants/Appellants are not yet in receipt of the entered Notice of Allowance/Notice of Allowability wherein it is anticipated that claims 1 and 8 have been cancelled by Examiner's amendment, and wherein claims 24 and 25 are in condition for allowance, claims 24 and 25 as set forth below may not be in the exact form as may be set forth in the Examiner's Amendment. In light of the above comments, the following claims are set forth as follows:

1. A method of producing an amino acid selected from the group consisting of L-lysine, L-threonine and L-isoleucine comprising:

culturing an altered *Corynebacterium glutamicum* cell, wherein said *Corynebacterium glutamicum* cell has a disrupted phosphoglucose isomerase (*pgi*) gene, wherein yields of an amino acid selected from the group consisting of L-lysine, L-threonine and L-isoleucine from said altered *Corynebacterium glutamicum* cell having a disrupted *pgi* gene are from about 1% to about 25% greater than yields from a *Corynebacterium glutamicum* cell having a non-disrupted *pgi* gene.

7. (Cancelled)

8. The method of claim 1, wherein said altered *Corynebacterium glutamicum* cell having a disrupted *pgi* gene is produced by

(a) subcloning an internal region of the *pgi* gene into a suicide vector; and

(b) inserting said resulting vector from step (a) into a *Corynebacterium glutamicum* genome via homologous recombination.

18. (Cancelled)

20. (Cancelled)

21. (Cancelled)

24. A method of producing L-amino acids selected from the group consisting of L-lysine, L-threonine and L-isoleucine, comprising:

culturing an altered *Corynebacterium glutamicum* cell having a decreased amount of phosphoglucose isomerase enzymatic activity as compared to an unaltered *Corynebacterium glutamicum* cell wherein said L-amino acid yields from said altered *Corynebacterium glutamicum* cell are from about 1% to about 25% greater than yields from an unaltered *Corynebacterium glutamicum* cell, wherein said *Corynebacterium glutamicum* cell has a disrupted *pgi* gene.

25. The method of claim 24, wherein said altered *Corynebacterium glutamicum* cell having a disrupted *pgi* gene is produced by

(a) subcloning an internal region of a *pgi* gene into a suicide vector; and

(b) inserting said resulting vector from step (a) into a *Corynebacterium glutamicum* genome via homologous recombination.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

O'DONOHUE *et al.*

Appl. No.: 09/621,448

Filed: July 21, 2000

For: **Methods for Producing L-Amino
Acids Using a Corynebacterium
Glutamicum with a Disrupted PGI
Gene**

Confirmation No.: 4431

Art Unit: 1652

Examiner: Steadman, David J.

Atty. Docket: 1533.1010002/MAC

Associate Power of Attorney

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The undersigned, Michele A. Cimbala, attorney of record in the present application, hereby appoints Craig G. Cochenour, Esq., Registration No. 33,666, of the firm **BUCHANAN INGERSOLL PC**, One Oxford Centre, 20th Floor, 301 Grant Street, Pittsburgh, Pennsylvania 15219 (telephone (412)562-3978, Facsimile (412)562-1041) as Associate Attorney with full power to prosecute the above-identified application.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michele A. Cimbala
Attorney for Applicants
Registration No. 33,851

Date: December 29, 2003

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

213661.1